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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Masaaki Ino

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EXAMINER

KARPINSKI, LUKE E

ART UNIT

PAPER NUMBER

1616

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/573,230	<b>Applicant(s)</b> INO ET AL.	
	<b>Examiner</b> LUKE E. KARPINSKI	<b>Art Unit</b> 1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 5-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

Receipt of amendments, arguments, and remarks filed 4/28/2010 is acknowledged.

### ***Claims***

Claims 1-4 are canceled.

Claims 5-22 are under consideration in this action.

### ***Rejections***

Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set presently being applied to the instant application.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Applicant Claims
2. Determining the scope and contents of the prior art.
3. Ascertaining the differences between the prior art and the claims at issue, and resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**1. Claims 5-22 are rejected under 35 U.S.C. 103(a)** as being unpatentable over International publication GB2067406 to DalMoro et al. in view of USPN 4,343,751 to Kumar and USPN 6,444,742 to Rong et al.

### ***Applicant Claims***

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Applicant claims a formulation comprising an insect-derived pheromone and a substrate consisting essentially of a calcined crystalline mineral, as well as preparation steps for said clay.

Applicant further claims said pheromones as natural or synthetic, percentages of said pheromones, specific clay materials, and specific clay preparation steps.

***Determination of the Scope and Content of the Prior Art (MPEP §2141.01)***

DalMoro et al. teach formulations comprising inert carriers and 0.5-10% insect pheromones (abstract), that said carriers may be attapulgites (page 2, lines 53-58), and that said formulations are sustained release (page 2, lines 14-18), as pertaining to claims 5.

DalMoro et al. further teach a variety of crystalline clay materials (page 2, lines 53-58), as pertaining to claim 6, pheromones of different insects (page 2, lines 45-46), as pertaining to claims 7 and 8, 5% pheromone (page 4 table 1), as pertaining to claims 9-12.

***Ascertainment of the Difference between Scope the Prior Art and the Claims (MPEP §2141.012)***

DalMoro et al. do not teach sepiolite, palygorskite, or montmorillonite as claimed in claims 13-16. This deficiency in DalMoro is cured by Kumar. Kumar teaches that attapulgites, sepiolites, palygorskites, and montmorillonites are functionally equivalent carriers for compounds such as pheromones (col. 3, line 58 to col. 4, line 5).

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Further, DalMoro et al. do not teach calcination or steps thereof as claimed in claims 5 and 17-22. This deficiency is cured by Kumar and Rong et al. Kumar teaches that said clays are calcined (col. 2, lines 33-50) and Rong et al. teach calcining clays at 350-850 degrees for 0.5-10 hours, which reads on 500-700 degrees for 5-120 minutes and from 30-60 minutes (col. 2, lines 38-50).

***Finding of Prima Facie Obviousness Rational and Motivation***

***(MPEP §2142-2143)***

Regarding claims 13-16, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to produce the formulations of DalMoro et al. with sepiolites, palygorskites, or montmorillonites in place of attapulgites as taught by Kumar in order to produce the invention of instant claims 13-16.

One of ordinary skill in the art would have been motivated to do this because Kumar and DalMoro are analogous art, DalMoro teach attapulgites as pheromone carriers and Kumar teach that attapulgites, as well as, sepiolites, palygorskites, and montmorillonites may be used as carriers. Therefore it would have been obvious to utilize the sepiolite, palygorskite, or montmorillonite of Kumar, in the formulations of DalMoro et al. in order to use other known carriers.

Regarding claims 5 and 17-22, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to produce the formulations of DalMoro using calcination as taught by Kumar and the calcination steps of Rong et al. in order to produce the invention of instant claims 5 and 17-22.

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One of ordinary skill in the art would have been motivated to do this because DalMoro, Kumar, and Rong et al. are analogous art, Kumar teaches calcined clays and Rong et al. teach specific time and temperature parameters at which to calcine said clays. Therefore it would have been obvious to calcine said clays as taught by Kumar and utilize the calcination parameters of Rong et al., with the formulations of DalMoro in order to calcine said clays by known steps.

From the teachings of the reference, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

### ***Response to Arguments***

Applicant's arguments have been fully considered but they are not persuasive.

Applicant argues that if one of ordinary skill were to combine Kumar with DalMoro that one would have replaced the calcined attapulgite with a mixture of calcined and non-calcined montmorillonite, sepiolite, or palygorskite.

This argument is not found persuasive because DalMoro et al. teach using calcined clay, Kumar is used to teach that one would have replaced attapulgite with montmorillonite, sepiolite, or palygorskite. It would have been reasonable to replace a calcined clay with another calcined clay, not a mixture of calcined and non-calcined clay. Given the combination of references one of ordinary skill would not see the only

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viable option to replace the calcined clay of DalMoro with a mixture of calcined/non-calcined clay as taught by Kumar.

### ***Conclusion***

Claims 5-22 are rejected.

No claims are allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### ***Inquiries***



Any inquiry concerning this communication or earlier communications from the examiner should be directed to LUKE E. KARPINSKI whose telephone number is (571)270-3501. The examiner can normally be reached on Monday Friday 9-5 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann R. Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LEK

*/Mina Haghighatian/*  
Primary Examiner, Art Unit 1616